Article

Changes to National Accounts: actual rentals and imputed rentals

Description of changes to actual and imputed rental in Blue Book 2017.

Contact:
Gareth Powell
gareth.powell@ons.gov.uk

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1 . Summary

This article explains the improvements to data sources and methods in the calculation of household expenditure on actual rentals for housing from private sector providers. These changes bring consistency with the improvements to imputed rentals made in Blue Book 2016 1. The changes to actual rentals will be introduced when revised figures for the UK National Accounts, consistent with Blue Book 2017, are published on 29 September 2017. There will be changes to levels and growths of the current price (CP) and chained volume measures (CVM) of gross domestic product (GDP). Some further improvements are also being made to imputed rentals, though these are small compared with the Blue Book 2016 changes.

The article Impact of Blue Book 2017, changes on GDP current prices annual estimates, 1997 to 2012 2 gives more detail about the impact of the changes on current price GDP.

2 . Introduction

Actual rentals for housing paid by households are an estimate of the housing services consumed by households who are actually renting their residence. Imputed rentals can be described as the income that a homeowner could have received if they rented their house to a tenant (for more information see Changes to National Accounts: Imputed Rental 1).

Actual rentals paid by households are classed as final consumption expenditure, corresponding to the output and income of housing providers (landlords). These changes have therefore been balanced against the output and income sources for the providers of housing services in the national accounts.

In the UK, actual rentals are substantially smaller than imputed rentals, as a majority of households own their homes. However, they still represent about 5% of household final consumption expenditure.

The changes to actual rentals described in this article are to actual rentals to private sector providers, which make up the bulk of the published estimates of total actual rentals for housing. Other smaller components of the published actual rentals series, such as rentals to housing associations and public sector bodies are not changed.

These revisions to actual rentals bring the data sources and methods in line with the improved approach for imputed rentals that were introduced in Blue Book 2016.

3 . Previous data sources and methodology

The current estimates of private actual rental for years before 2010 are based on price information from the Living Costs and Food (LCF) survey and housing stock levels from the Department for Communities and Local Government (DCLG).

The LCF data are based on around 400 households' rental prices per quarter, including those renting from public sector and housing associations and also including both furnished and unfurnished properties.

For the current price estimates, a rent-per-room figure is calculated using the LCF and then multiplied by the number of privately rented rooms given by DCLG.

For the chained volume measure (CVM), the privately rented housing stock estimate from DCLG is used, with an adjustment applied to reflect the assumption that there is a constant rate of improvement in quality.

When the Consumer Prices Index including owner occupiers' housing costs (CPIH) was introduced in 2013, it showed a different evolution in prices from the implied deflators calculated from the current price (CP) and CVM imputed and actual rentals estimates.

We implemented an interim solution in Blue Book 2014, fixing the CP imputed and actual rentals series so that they grew in line with the CPIH deflators. This improvement was implemented for 2010 onwards, as only this period was open for revision at the point of introduction. Although this improved the series for the most recent period, bringing it in line with the CPIH, it also introduced a discontinuity.

While this discontinuity mainly affected the CP series, it also indirectly affected total household final consumption expenditure (HHFCE) CVM estimates. This was because in order to prevent the 2010 discontinuity in the CP imputed and actual rental series from unduly influencing total CP HHFCE growth, balancing adjustments were applied across HHFCE components for 2010. These balancing adjustments were smaller for actual rentals than imputed rentals, totalling around £570 million for 2010 in CP.

The improvements to imputed rentals meant that the discontinuity in imputed rentals could be removed in Blue Book 2016. Similarly, the discontinuity in actual rentals is being removed as part of the Blue Book 2017 changes to actual rentals.

4 . New data sources and methodology – private actual rentals

The new approach for private actual rentals, to be implemented in Blue Book 2017, will use Valuation Office Agency (VOA) data on rental prices and similar data from the devolved administrations, instead of prices from the Living Costs and Food (LCF) survey. This mirrors the changes made to imputed rental in Blue Book 2016.

These administrative sources have much larger sample sizes than the LCF (for example, around 500,000 properties per year in the VOA data) and this also allows the use of an improved methodology based on the stratification of households by region and dwelling type. In addition, the new price data enable furnished and unfurnished properties to be separately identified.

The new source data also allow separate identification of actual rentals for second homes (classification of individual consumption by purpose (COICOP 04.1.2)) . It was not previously practical to populate this classification due to the small sample size of the LCF. Values for this category are relatively small, with annual current price (CP) estimates growing from around £80 million to around £200 million between 1997 and 2012.

Under the new method, the CP measure is calculated first. The population is stratified by region and dwelling type. The regions used are the 12 NUTS 1 regions 3 (that is, Wales, Scotland, Northern Ireland and the 9 English regions) and the dwelling types are flats (including maisonettes), terraced houses, semi-detached houses and detached houses.

Within each of these strata, private actual rentals are calculated as the average price of privately rented dwellings, multiplied by the number of dwellings. Different prices are used for furnished and unfurnished properties, with the proportions assigned to each taken from the LCF.

Whilst new administrative sources are now used for rental prices, the number of dwellings is still sourced from the Department for Communities and Local Government (DCLG).

Total private actual rentals in CP is then the sum of the private actual rentals across all the strata.

For 2015 and onwards, the Consumer Prices Index including owner occupiers' housing costs (CPIH) private actual rentals component is used as the deflator for household final consumption expenditure (HHFCE) on private actual rentals. For periods before 2015, a modified version has been specifically produced. Between 2005 and 2014, this is based on the experimental Index of Private Housing Rental Prices (IPHRP), which covers England, Scotland and Wales, combined with separate information for Northern Ireland. An aggregation of rentals sub-components of the Consumer Prices Index (CPI) is used for earlier years. The modified deflator has been used because it includes improvements to the methodology for using price data from the VOA between 2005 and 2014. The published CPIH component has not been revised to take on these improvements because the impact on the headline CPIH is very small. Details of the improvements are given in the article Improvements to the measurement of owner occupiers' housing costs and private housing rental prices [4].

The new data sources for prices are used from 2006 onwards for English regions, while for the other countries they begin later. As such, we use backcasting (using a combination of the LCF data and the modified CPIH discussed previously) in order to take the time-series back to 1997. The price data are also forecast to the latest period (where data are not yet available) at the strata level using standard ONS forecasting principles [5].

The total stock, by region, data start from 1997 as required, however, total stock by dwelling type is available from 1999. Backcasting is again used to take the latter series back to 1997 and both series are forecast to the latest period at a strata level using the standard ONS forecasting method (X-13-ARIMA-SEATS), where data are not yet available.

Pre-1997 data will also be made available in line with other historic national accounts series.

It is worth noting that the VOA prices used to estimate CP actual rentals include all relevant dwellings in the region or dwelling type. This differs from the CPIH method, which uses matched-pairs of dwellings. This is because the CPIH is trying to isolate changes in price from changes in the quality of the product being sold. If rental prices went up because poor quality rentals were replaced with higher quality rentals, this change should not be captured in the CPIH as it is not a price change – but it would (and should) be captured within the national accounts.

The previous private actual rental method largely assumed that the quality of owner occupied housing increased at a fixed rate. In the new method, changes in the quality of housing stock are included in the CP series. The CVM series also includes quality changes in each period, because quality changes are not removed by the deflation process. This is as intended and should be reflected in both the CP and volume measures of gross domestic product (GDP), as they represent a component of the real output taking place.

To create a quarterly path, the quarterly deflator series is used to estimate price changes within a year, benchmarked to the annual values, while the stock data are interpolated.

5 . New data sources and methodology – imputed rentals

As part of the process of bringing the sources and methods for private actual rentals into line with imputed rentals, we identified some further improvements to imputed rentals. These are being implemented in Blue Book 2017. The most significant of the changes were the following.

We have improved the way non-calendar year data for housing stocks and rental prices are mapped to calendar years.

The other imputed rentals category (classification of individual consumption by purpose (COICOP 04.2.2)) includes the imputed rentals on rent-free housing (for example , provided by employers to employees). This part of imputed rentals was previously treated as a component of owner occupied rentals and, as such, was deducted from the overall total for owner occupied dwellings in the calculations. That was incorrect because, in the Department for Communities and Local Government (DCLG) figures, rent-free dwellings are included in the totals for privately rented housing stock. For Blue Book 2017, this has been corrected, which results in upward revisions to the levels of owner occupiers' imputed rentals (COICOP 04.2.1).

Overall, these changes have relatively little impact on growths (mostly consisting of level shifts in the current price (CP) and chained volume measure (CVM) series) and are substantially smaller than the changes to imputed rentals made in Blue Book 2016.

6 . Conclusions and impact

These changes lead to significant improvements in the estimates of actual rentals. The administrative data are more comprehensive than the survey data previously used which allows us to improve the conceptual consistency between the data collected and the estimates being calculated. Further, because the method has now been aligned with the Consumer Prices Index including owner occupiers' housing costs (CPIH), the discontinuity in 2010 can be removed, so that the whole of the series is on a comparable basis.

The expected impacts of these changes on current price estimates in Blue Book 2017 are set out in the article Impact of Blue Book 2017, changes on GDP current price annual estimates 1997 to 2012 [2]. Their effect is to raise the level of the estimates of actual rentals and generally to lower the growth of the pre-2010 current price (CP) series (see Figure 1).

The changes to imputed rentals have resulted in a small upwards level shift in the CP series, with some impacts on growths also evidenced (see Figure 2).

Figure 1: Commodity 04.1 – Actual Rentals for Housing, in the UK, Current Price
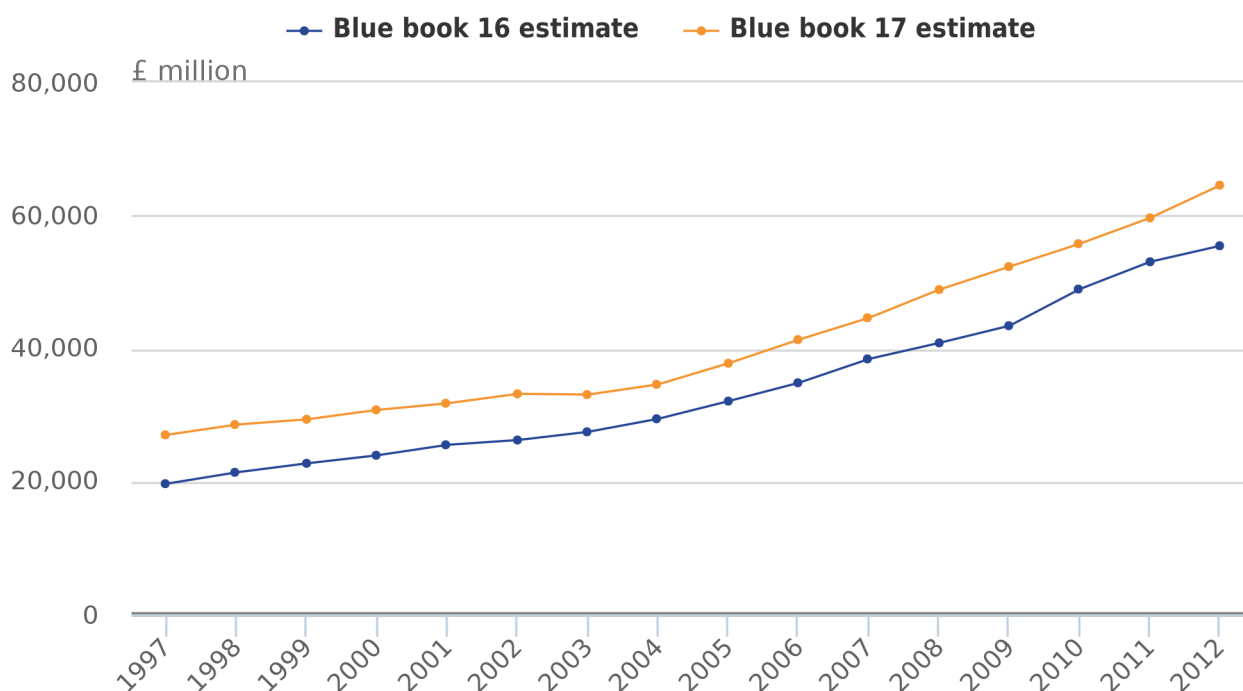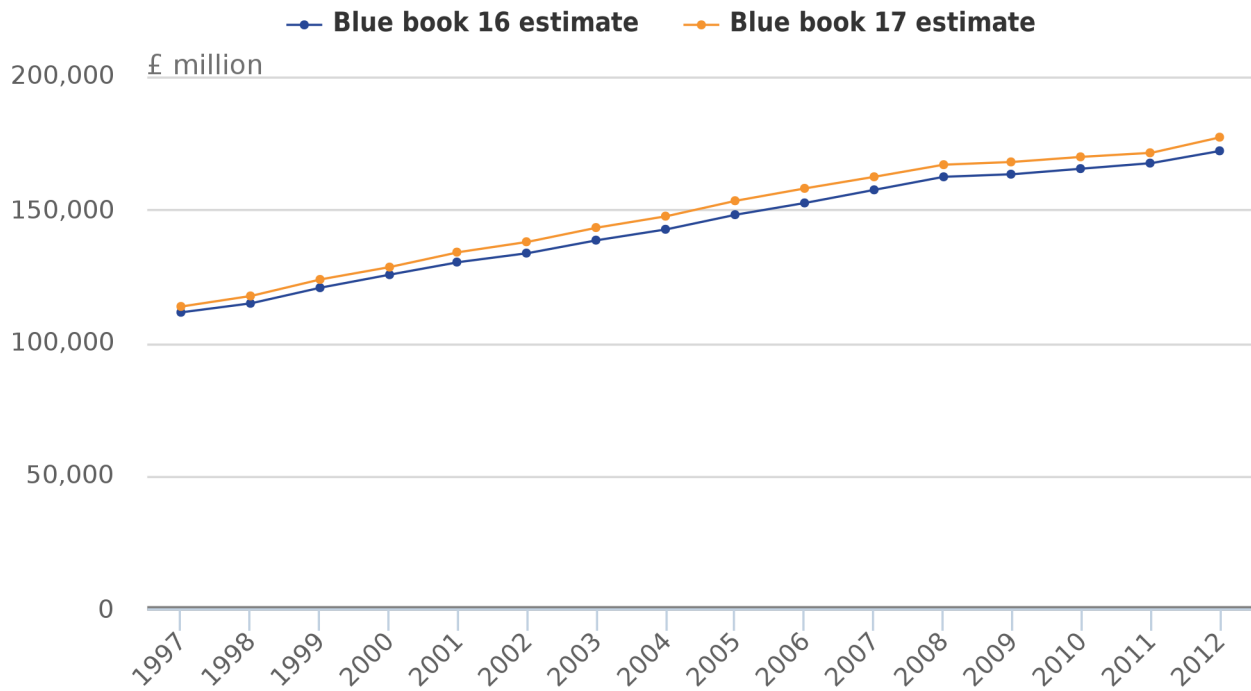
1997 to 2012

Source: Office for National Statistics

Figure 2: Commodity 04.2 – Imputed Rentals for Housing, in the UK, Current Price

1997 to 2012

Source: Office for National Statistics

These methodological changes also impact on the chained volume measure (CVM) series. For actual rentals the impact on CVM growth is generally smaller than the impact on CP (Figure 3). For imputed rentals, the impact on CVM and CP growth is similar (Figure 4). This is because most of the changes affect the volume, rather than price components.

Figure 3: Commodity 04.1 Actual Rentals for Housing, in the UK, Current Price and Chained Volume Measures, revisions to year-on-year growth rates
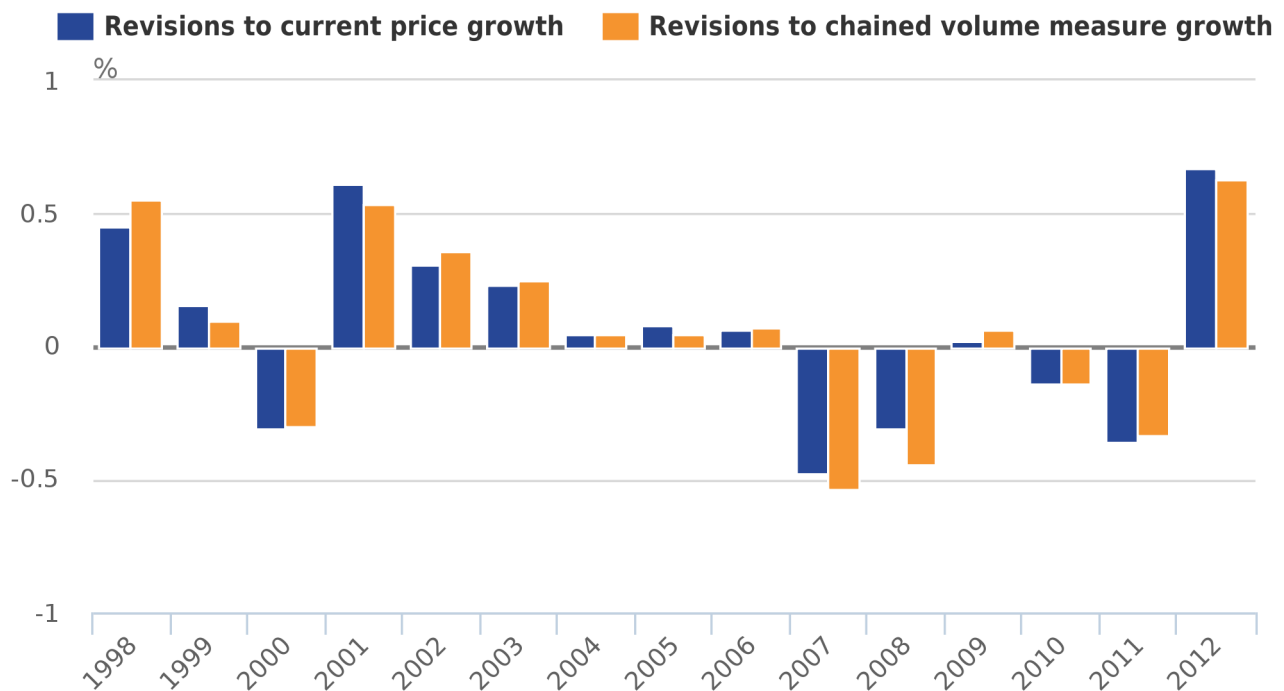
1998 to 2012
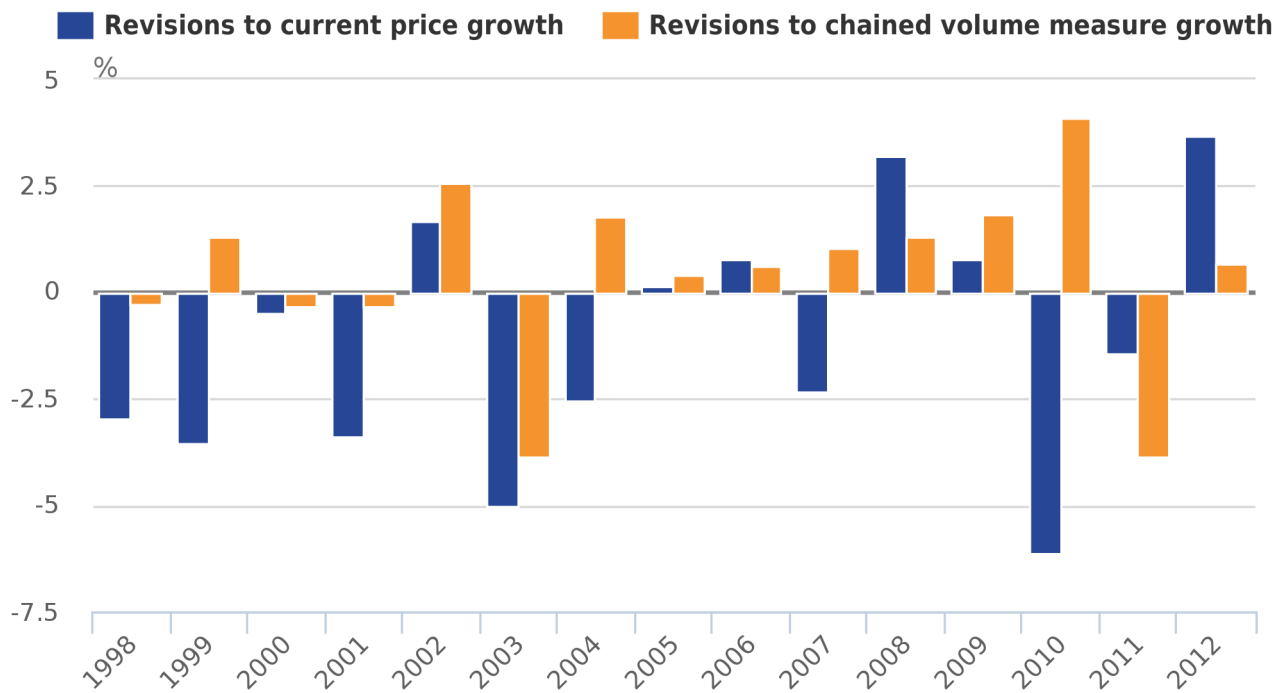
Source: Office for National Statistics

Figure 4: Commodity 04.2 - imputed rentals for housing, in the UK, current price and chained volume measures, revisions to growth rates

1998 to 2012

Source: Office for National Statistics

In addition to the changes to actual rentals, there are secondary revisions to total household final consumption expenditure (HHFCE) due to the unwinding of the discontinuity (as described in the Previous sources and methodology section, paragraph 3 .6). The impact on both CP and CVM growth rates of HHFCE in these 2 years is much smaller than the direct impact from the change to actual rentals itself.

7 . Authors

Hugh Skipper, Kevin Latimer, Office for National Statistics

8 . References

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5 ONS (2015): ONS Methodology Working Paper Series No 2 – Practical guidance on modelling for the implementation of changes to National Accounts outputs URL: http://www.ons.gov.uk/ons/guide-method/method-quality/specific/gss-methodology-series/ons-working-paper-series/mwp2-practical-guidance-modelling-na.pdf